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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,920	12/19/2001	Helmut Mangold	39509-176287	8866

26694 7590 08/11/2004

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EXAMINER
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NGUYEN, NGOC YEN M

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/020,920		MANGOLD ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Ngoc-Yen M. Nguyen		1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 22, 2004 has been entered.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over CA 2,223, 377 in view of Vanell (6,423,638).

CA '377 discloses a process for preparing pyrogenically-prepared oxides of metals and/or non-metals, wherein an aerosol is fed to a flame such as is used for preparing pyrogenic oxides by flame hydrolysis, the aerosol being homogeneously mixed with the gas mixture for flame oxidation or flame hydrolysis prior to reaction, the aerosol/gas mixture is allowed to react in the flame and the resulting doped pyrogenically-prepared oxides are separated from the gas stream (note claim 3). The

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aerosol is produced by nebulization using a two-fluid nozzle (note claim 5). CA '377 further discloses that the doping component is from 0.00001 to 20 wt%, preferably from 1-10,000 ppm (note claim 2) and the doped oxides have a BET surface area between 5-600 m<sup>2</sup>/g (note claim 1). The doped metal oxides can be potassium-doped silica (note Example 5).

CA '377 does not disclose specifically the breadth of the distribution of particle size, the pH or the absorption of dibutylphthalate of the oxide product.

In case the product of CA '377 does not inherently have the same breadth of distribution of particle size, the desire of monodispersed product is well known and conventional in the art. Thus, it would have been obvious to one skill in the art to subject the product of CA '377 to a screening process in order to obtain a monodisperse product.

CA '377 teaches that the product can be used as fillers, as polishing materials for polishing metal or silicon wafers in the electrical industry, etc. (note page 4, lines 11-21).

Vanell '638 is applied to teach that ideally, a polishing slurry comprises abrasive particles having a size distribution in a narrow range, i.e., the abrasive particles are of uniform size (note column 2, lines 47-50). When the polishing slurry has a wide distribution of particle sizes, the filter is used to filter out particles above a predetermined size (note paragraph bridging columns 2-3).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to either optimize the process condition of the process of CA '377 to produce a product with narrow particle size distribution or to use a filter to remove

particles outside of the predetermined size, as suggested by Vanell '638 because the product of CA '377 is suitable for being use as polishing materials and such polishing materials are desired to have uniform particle size as disclosed in Vanell '638.

Applicant's arguments filed July 22, 2004 have been fully considered but they are not persuasive.

Applicants argue that in the new claims 8-10, the concentration range of "more than 0.03 by wt." for the potassium content results in a change of the morphology.

It should be noted that the amount of dopant in CA '377 is preferred to be from 0.00001 to 20 wt.% (note claim 1) , thus, when the amount of dopant in CA '377 is higher than 0.03 wt%, the same morphology change would occur for the product of CA '377.

Applicants argue that there is no need for the "screening step" in the claimed invention.

As stated in the above rejection, since Vanell '638 fairly suggests that abrasive particles, when used in a polishing slurry, are desired to have a size distribution in a narrow range, thus, it would have been obvious to one of ordinary skill in the art to optimize the process conditions in CA '377 in order to obtain a product with narrow size distribution so that it can be used in a polishing slurry. Applicants have not provided any evidence to show that the process of CA '377 could not be optimized to obtain such effect. In the event that a screening step is required for the process of CA '377, such step would not be excluded by the "consisting essentially" language because when such

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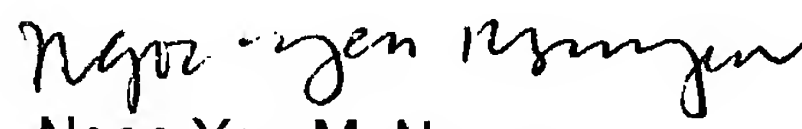
step is present in the process of CA '377, a product with narrow particle size distribution is obtained.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (571) 272-1356. The examiner is currently on Part time schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stan Silverman can be reached on (571) 272-1358. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed (571) 272-1700.

  
Ngoc-Yen M. Nguyen  
Primary Examiner  
Art Unit 1754

nmn  
August 9, 2004